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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,337	07/20/2001	Zuoxing Yu	CSA 20143	3639

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EXAMINER
GOFF II, JOHN L

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/910,337	Applicant(s) YU ET AL.	
	Examin r John L. Goff	Art Unit 1733	

-- The MAILING DATE of this communication app ars on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) *7,21,24 and 31-47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-20,22,23 and 25-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. This action is in response to Amendment A filed on 7/7/03.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As amended claim 1 requires "providing a crosslinkable thermoplastic consisting essentially of polyolefin". It is unclear where in the specification the crosslinkable thermoplastic is described as "consisting essentially of polyolefin". It is noted the specification does disclose the crosslinkable thermoplastic as "comprising a polyolefin" (Page 3, lines 21-22).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The term "essentially" in claim 1 is a relative term which renders the claim indefinite. The term "essentially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. As amended claim 1 requires "providing a crosslinkable thermoplastic consisting essentially of polyolefin". It is unclear what is required by the term "essentially". It is unclear what percentage of polyolefin is required for the crosslinkable thermoplastic to meet the limitation. Further, it is unclear what other components make up the crosslinkable thermoplastic along with the polyolefin.

Claim Rejections - 35 USC § 103

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 2, 5-6, 8, 9, 12-16, 19, 20, 22, 23, 25, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (5,183,613) in view of Cook (U.S. Patent 5,415,822).

Edwards is directed to a process for forming a glass run channel for use in an automotive application. Edwards teaches a composite extrusion comprising a channel member made of thermoset elastomer such as EPDM and an abrasion resistant layer made of thermoplastic material such as a polyolefin. Edwards teaches forming the composite extrusion by co-extruding the channel member (at a temperature of 60-150 °C) and abrasion resistant layer (at a temperature greater than 200 °C) such that the abrasion resistant layer contacts the channel member forming a 0.2 to 0.4 mm abrasion resistant layer on the channel member. Edwards teaches curing the channel member after co-extruding the composite member (Figure 1 and Column 1, lines 9-14 and Column 6, lines 53-61 and Column 8, lines 36-44 and Column 9, lines 11-14 and Column 11, lines 24-33 and 45-51 and Column 12, lines 1-8 and 12-15). Edwards is silent as to a specific recitation for using as the abrasion resistant layer a crosslinkable polyolefin. However, it is noted Edwards is directed to using general polyolefins known to one in the art, and Edwards is not limited to any particular, i.e. crosslinkable or non-crosslinkable, polyolefin. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the polyolefin taught by Edwards a crosslinkable polyolefin, i.e. a polyolefin crosslinked by means such as moisture, as it was well known in the art to use a crosslinkable polyolefin as the abrasion resistant layer as shown for example by Cook and only the expected results would be achieved.

Cook is directed to manufacturing composite extrusions for use as glass run channels. Cook teaches a composite extrusion comprising a main body member made of thermoset material such as EPDM and an abrasion resistant layer made of thermoplastic material such as polyolefin which can be crosslinked by peroxides, moisture, UV, and other systems. Cook

teaches the abrasion resistant layer may comprise additional components other than polyolefin. However, the primary material of the abrasion resistant layer is polyolefin such that the abrasion resistant layer taught by Cook comprises "essentially" polyolefin. Cook teaches forming the composite extrusion by extruding the main body member (at a temperature of 80-150 °C), curing the main body member (at a temperature of 180-250 °C), and extruding on top of the main body member the abrasion resistant layer (at a temperature greater than 140-250 °C) such that the main body member and abrasion resistant layer form a bonded composite (Figure 1 and Column 1, lines 8-14 and Column 4, lines 15-24, 30-34, and 37-40 and Column 5, lines 7-36).

Regarding claims 5, 6, 11, and 20, one of ordinary skill in the art at the time the invention was made would be readily expected to determine the optimal extrusion and curing temperatures as it is well known in the art to optimize these parameters without requiring anything other than ordinary skill and routine experimentation.

Regarding claims 8 and 22, it is noted that Edwards teaches the abrasion resistant layer is co-extruded along with the channel member and the two layers are contacted directly after extrusion such that one of ordinary skill in the art would have readily appreciated that the modification of Edwards with the crosslinkable abrasion resistant layer taught by Cook would create a process wherein the abrasion resistant layer is crosslinked after contacting the channel member because (1) the two layers are co-extruded, i.e. the abrasion resistant layer could not be extruded if it were already crosslinked and (2) the layers are contacted directly after extrusion.

Regarding claims 9 and 23, it is noted Edwards teaches co-extrusion occurs using "any suitable extrusion apparatus in a conventional manner as is well know in the art and literature". One of ordinary skill in the art would have readily appreciated that the conventional co-extrusion

taught by Edwards occurs through a common, conventional extrusion die as only the expected results would be achieved.

10. Claims 3, 4, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards and Cook as applied above in paragraph 9, and further in view of Scott et al. (U.S. Patent 3,646,155).

Edwards and Cook teach all of the limitations in claims 3, 4, 17, and 18 as applied above except for specific teaching of using as the abrasion resistant layer a silane grafted polyolefin that is crosslinked in a steam bath. However, as shown above Cook suggests using a moisture crosslinkable polyolefin as the abrasion resistant layer. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the moisture crosslinkable polyolefin taught by Edwards as modified by Cook a silane grafted polyolefin crosslinked in a steam bath as suggested by Scott et al. to enable crosslinking of the polyolefin under less critical crosslinking conditions than those which are normally present in conventional crosslinking techniques.

Scott et al. are directed to crosslinking polyolefins. Scott et al. teach crosslinking the polyolefins with a silane reactant in a steam bath wherein crosslinking of the polyolefin with the silane enables crosslinking of the polyolefin under less critical crosslinking conditions than those which are normally present in conventional crosslinking techniques (Column 1, lines 22-24 and 54-61 and Column 3, lines 50-51 and 74-75 and Column 4, lines 1-11 and Column 5, lines 14-17).

11. Claims 10, 11, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards and Cook as applied above in paragraph 9, and further in view of Hayashi (U.S. Patent 6,099,676).

Edwards and Cook teach all of the limitations in claims 10, 11, 26, and 27 as applied above except for specific teaching of using a preformed, i.e. tape, abrasion resistant layer. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the abrasion resistant layer taught by Edwards as modified by Cook a preformed abrasion resistant layer as suggested by Hayashi such that the abrasion resistant layer could be formed at one location and laminated to the channel member in another location at a later time.

Hayashi is directed to a method of forming a glass run channel. Hayashi teaches a composite extrusion comprising a channel member made of EPDM and an abrasion resistant layer made of thermoplastic material such as a polyolefin. Hayashi teaches forming the composite extrusion by extruding the channel member and contacting a preheated abrasion resistant tape, i.e. preform, with the channel member such that the abrasion resistant layer contacts the channel member to form a composite extrusion. Hayashi further teaches continuously pressing the abrasion resistant tape on the channel member using a roller, i.e. lamination wheel (Figures 1, 7, and 8 and Column 1, lines 21-31 and Column 2, lines 14-17, 22-26, 43-45, and 53-55).

Response to Arguments

12. Applicant's arguments filed 7/7/03 have been fully considered but they are not persuasive. Applicant argues there is no motivation to combine Edwards and Cook. It is noted

Edwards discloses an abrasion resistant layer that comprises polyolefin. Edwards is silent as to if the polyolefin is crosslinkable or non-crosslinkable. Cook is cited to show it is well known in the art of Edwards to use a crosslinkable polyolefin as the abrasion resistant layer such that one of ordinary skill would have readily appreciated using as the polyolefin taught by Edwards a crosslinkable polyolefin as suggested by Cook as both are directed to the same art, i.e. the formation of glass run channels, and only the expected results would be achieved. Applicant further argues that in Cook it is the EPDM or butyl modifiers that may be crosslinked not the polyolefin. It is noted Cook teaches "Some of the thermoplastic materials which can be used are polyethylene, polypropylene, or ethylene vinyl acetate. These *can be modified* with EPDM or butyl compounds *and* crosslinked by peroxides or moisture or UV and other systems." (emphasis added) It is noted Cook clearly teaches the polyolefin materials can be both modified and crosslinked, and the polyolefin materials do not require modifiers to be crosslinkable. Regarding applicants arguments with respect to claims 8 (crosslinking the polyolefin) and 9 see paragraph 9 above. Applicant further argues there is no motivation to combine Edwards and Cook with Hayashi. It is noted it is a well known technique in the art to provide an extruded member as a perform such that the member can be extruded at one location and then further processed at another location. Hayashi is cited to show this well known technique in the art of forming glass run channels and it would have been well within the purview of one of ordinary skill in the art to use as the extruded abrasion resistant layer taught by Edwards as modified by Cook a preformed, i.e. tape, layer as suggested by Hayashi for the benefits given above.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

John L. Goff
September 22, 2003

Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700